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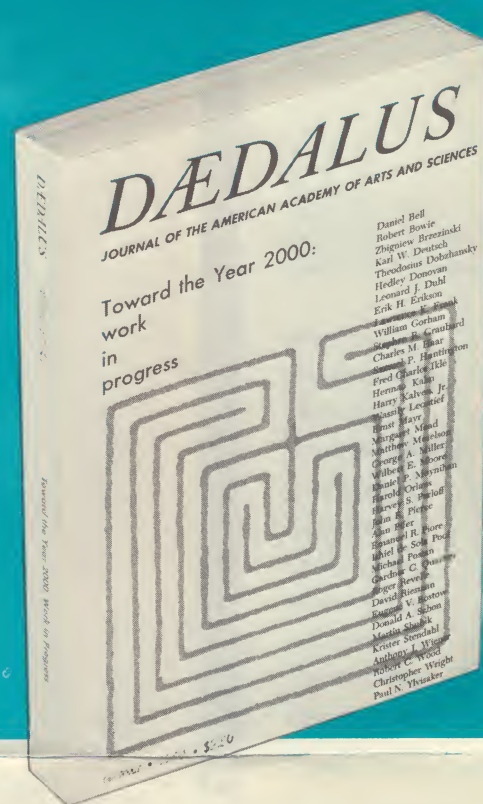
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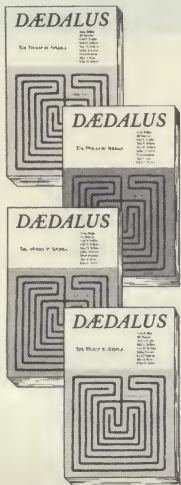
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# 2 NEW AAAS SYMPOSIUM VOLUMES

published during the summer of 1968 by the

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

## • Biology of the Mouth • Folk Song Style and Culture

### 89 Biology of the Mouth

**Editor:** Philip Person, Chief, Special Research Laboratory for Oral Tissue Metabolism, Veterans Administration Hospital, Brooklyn.

320 pp., electron micrographs and other illustrations, bibliog., index, 1968.

Price: \$10.00. AAAS members' cash orders: \$8.75.

A collection of comprehensive, multi-disciplinary articles dealing with problems of the biology of the mouth and of oral disease and also the borderlands where fundamental approaches and investigations in physics and chemistry relate to, and can be brought to bear on, such problems. Among the disciplines represented are comparative anatomy and histology (light and electron microscopy), comparative molecular biochemistry, anthropology, paleontology, neuroanatomy and neurophysiology, zoology, botany, solid-state physics, and chemical physics. An attempt is made to integrate these varied contributions, to provide a broad perspective in which important mutual interests are identified and explored. This perspective includes the classical disciplines of Darwinian biology and the more recent disciplines of molecular and quantum biology, as well as their relationships to diseases of the mouth and oral structures. A feature of the volume is a highly original and significant contribution by Professor J. Z. Young dealing with the influence of the mouth upon the evolution of the brain.

#### Contents

Foreword: Place of Dentistry in Science, *Carl A. Ostrom*, U.S. Navy; Biology of Oral Tissues and Oral Disease: Darwin and Quantum, *Philip Person*, Brooklyn.

Influence of the Mouth on the Evolution of the Brain, *J. Z. Young*, Lon-

don; Bone, Dentin, and Enamel and the Evolution of Vertebrates, *Melvin L. Moss*, New York; Tooth and Jaw in the Assessment of the Origins of Man, *John T. Robinson*, Madison; Cleaning Symbiosis and Oral Grooming on the Coral Reef, *Elliott C. L. Maynard*, Garden City; Lactoperoxidase, the Peroxidase in the Salivary Gland, *Martin Morrison*, Memphis, and *Wilbert F. Steele*, Corvallis; Biochemical Processes in Macromolecular Environments: Plant Cell-Wall Matrix in Lignin Polymer Foundation, *S. M. Siegel*, Honolulu.

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### 88 Folk Song Style and Culture

**A Staff Report on Cantometrics**

**Editor:** Alan Lomax.

384 pp., 80 illus., 87 tables, bibliog., index, 1968.

Price: \$16.75. AAAS members' cash orders: \$14.50.

*Folk Song Style and Culture* relates song style and dance style to many aspects of social structure and behavior. The relationships have been identified by "cantometrics," a coined word mean-

ing the study and measurement of song. The book affirms that song characteristics trace the main paths of many cultures; it also shows that specific qualities of song performance are directly related to identifiable attributes of ancient, modern, and primitive cultures.

#### Contents

The Stylistic Method; The Cantometrics Experiment; The Cantometric Coding Book; The World Song Style Map.

Consensus on Cantometric Parameters: A. Consensus Testing; B. The Paralinguistic Framework.

Song as a Measure of Culture; Social Solidarity; Self-Assertion, Sex Role and Vocal Rasp; Effects of Infantile Stimulation on Musical Behavior.

Dance Style and Culture; Choreometric Profiles; The Choreometric Coding Book; Folk Song Texts as Culture Indicators; Cantometrics in Retrospect.

Appendixes: Data Systems and Programming; Statistical Notes; Summodal Profiles for Nine World Song Style Regions.

Bibliography. Folk Song Text Sources. Film Sources. Index.

The book was written by members of the staff of the Cantometrics Project of Columbia University:

*Alan Lomax*, project director; *Conrad Arensberg*, co-director; *Edwin E. Erickson*, ethnologist; *Victor Grauer*, musicologist; *Norman Berkowitz*, programmer; *Irmgard Bartenieff*, director of dance research; *Forrestine Paulay*, dance specialist; *Joan Halifax*, research assistant; *Barbara Ayres*, ethnologist; *Norman N. Markel*, consulting linguist; *Roswell Rudd*, music analyst; *Monika Vizedom*, ethnologist; *Fred Peng*, linguist; *Roger Wescott*, consulting linguist; *David Brown*, consulting statistician.

see page 4 for complete list and order coupon



## 78 Man, Culture, and Animals

### The Role of Animals in Human Ecological Adjustments

**Editors: Anthony Leeds and Andrew P. Vayda**

304 pp., illus., bibliog., 3 indexes, 1965, second printing 1967.

Price: \$8.00. AAAS members' cash orders: \$7.00.

The volume presents case studies of the relationships among human populations, the animals they use for food or food-getting, the plants significant for maintaining both animals and men, and the socio-cultural usages by which plants, animals, and men are linked in ecosystems.

Anthropologists and geographers discuss animal characteristics, population dynamics, diets, and other ecosystem variables, including culture. The case material is used for a unique effort to rethink the logic of functional analysis in anthropology in terms of general systems approaches.

## 81 Environmental Variables in Oral Disease

**Editors: Seymour J. Kreshover and F. J. McClure**

328 pp., illus., bibliog., index, 1966.

Price: \$8.75. AAAS members' cash orders: \$7.75.

Twenty-four distinguished scientists present the findings of their recent research on the role of environmental factors in oral disease. The 17 chapters are grouped under four general headings:

*Geographical and Clinical Considerations.*

*The Oral Environment—Nutrition and Dental Caries.*

*Experimental Considerations in Oral Soft Tissue Lesions.*

*Prenatally Occurring Influences.*

## 75 Mechanisms of Hard Tissue Destruction

**Editor: Reidar F. Sognnaes**

776 pp., 430 illus., color plate, bibliog., indexes, 1963.

Price: \$13.00. AAAS members' cash orders: \$11.00.

Symposium by 49 outstanding co-authors on destruction of mineralized structures by organisms and by physical and chemical agents, ranging from rock boring to bone resorption and tooth decay. This volume has received high praise. It is of interest far beyond the field of dental research.

## 87 Formulation of Research Policies

### Collected Papers from an International Symposium

**Editors: Lawrence W. Bass and Bruce S. Old**

218 pp., tables, illustrations, 1967.

Price: \$7.75. AAAS members' cash orders: \$6.75.

*Formulation of Research Policies* is a collection of papers presented at a Gordon Research Conference held in Santa Barbara, California, in 1966. Nineteen leaders in the field of policy formulation from eleven foreign countries and the United States analyze and describe science policies at national, international, and corporate levels.

Today, nations great and small as well as corporations find it impossible to support all of the science and technology that appears to be relevant to their growth and strength. Hence, science policy or the "science of science" at all levels compels serious attention and discussion. And the magnitude of many research projects tends to foster international cooperation in administration and funding.

Goals, accomplishments—and weaknesses—of past and present science policies of nations, government agencies, individual industries, and international organizations are given expert and candid appraisal in this work—the record of an exciting conference.

## 56 Symposium on Basic Research

**Editor: Dael Wolfe**

328 pp., 1959.

Price: \$3.00. AAAS members' cash orders: \$2.50.

Leading scientists and administrators examine many aspects of basic research: its importance to society; the conditions that best foster it; the need to develop favorable public opinion toward it; its effect on teaching; the role of public and private agencies in its support.

## 83 Estuaries

**Editor: George H. Lauff**

776 pp., 7¾" x 10½", illus., bibliog., index, 1967. 2nd prtg. 1968.

Price: \$27.00. AAAS members' cash orders: \$24.00.

*Estuaries* is the first comprehensive collection of scientific papers covering

the comparatively new field of estuarine research. The volume contains seventy-one articles on physical and biological factors, geomorphology, sediments and sedimentation, microbiota, ecology, evolution, fisheries, human influences, and pollution. Some of the most outstanding scholars of this new discipline have contributed to this valuable work. *Estuaries* is based on the 1964 Conference on Estuaries, Jekyll Island, Georgia; additional papers have been included. A supplementary bibliography lists more recent contributions to this new field of study.

## 80 Air Conservation

### Report of the AAAS Air Conservation Commission, James P. Dixon, Chairman

348 pp., illus., bibliog., index, 1965. 2nd prtg. 1967.

Price: \$8.00. AAAS members' cash orders: \$7.00.

Product of a two-year study by the AAAS Air Conservation Commission, *Air Conservation* is useful to both scientists and laymen. Part One, Air Conservation and Public Policy, assembles the facts and identifies alternatives. Part Two, Summary of the Facts, is a concise report on the state of scientific knowledge in the field of air conservation. Part Three, Background Reports, the largest part of the book, consists of seven chapters of interest to scientists and specialists in other disciplines.

## 67 Oceanography

**Editor: Mary Sears**

665 pp., 146 illus., bibliog., index, 1961, 4th prtg. 1966.

Price: \$14.75. AAAS members' cash orders: \$12.50.

Thirty papers by world-renowned authorities present the history of the oceans, populations of the sea, the deep sea, boundaries of the sea, and cycles of organic and inorganic substances in the ocean. Truly an interdisciplinary symposium, the first International Oceanographic Congress, where these papers were presented, dealt with some of the most profound questions of mankind: the origin and history of living things and the history of our galaxy as recorded in marine sediments. Contributors include Ewing, Bruun, Hutchinson, Bernal, Oparin, Cloud, Braarud, Malkus, Zenkevitch. Each chapter can be read with enjoyment by both scientists and laymen.



## 86 Ground Level Climatology

**Editor: Robert H. Shaw**

408 pp., 144 illus., bibliog., index, 1967.  
Price: \$12.50. AAAS members' cash orders: \$10.50.

*Ground Level Climatology* consists of twenty papers dealing generally with the theme of weather and agriculture (including forestry) and specifically with the climate closely surrounding plants and animals—the microclimate. Investigators in the field of ground level climatology seek to understand the complex relationships between living organisms and their environment: the relation of climate to the distribution and abundance of plants and animals; the effects of weather modification on physical processes within the microclimate; and the effects of moisture, temperature, and energy balance on physiological functions.

Chapters in this book describe the effect of climate on specific plants and animals; the influence of ground level climatology on forest fires; climate and animal husbandry; plant and animal reactions to various environments. All these have far-reaching effects—both favorable and unfavorable—on plants and animals, and ultimately on man.

## 85 Agriculture and the Quality of Our Environment

**Editor: N. C. Brady**

476 pp., bibliog., author and subject indexes, 1967.

Price: \$13.50. AAAS members' cash orders: \$11.50.

*Agriculture and the Quality of Our Environment* addresses itself to this two-pronged problem: How does environmental quality affect agriculture and how does agriculture affect the quality of the environment? Thirty-six scientists discuss these subjects:

Deleterious effects of air, water, and soil pollution on plants and animals. Evidence for the widespread and serious damage resulting from air pollutants. Extent and consequences to agriculture of salt buildup in soils and water. Dangers from radionuclide contamination of soil, water, and air.

Potential and actual pollution resulting from agricultural practices. Extent of pesticide buildup in soil and water and of means to minimize potential hazards from pesticide use. Siltation of reservoirs and streams and their nutrient enrichment from fertilizer and manure applications. Efforts to dispose of or utilize animal wastes.

This book provides a good summary and analysis of agriculture's stake in the quality of our environment. It also identifies the part which science must play to solve environmental pollution problems.

## 77 Food Quality

**Effects of Production Practices and Processing**

**Editors: George W. Irving, Jr. and Sam R. Hoover**

306 pp., bibliog., index, 1965.

Price: \$8.50. AAAS members' cash orders: \$7.50.

This volume covers an important and, in recent years, rapidly developing field of science: the production, protection, and processing of foodstuffs of high nutritional and esthetic value. To meet the vital needs of growing populations, the achievement of maximum efficiency in each of these areas, both here and abroad, becomes ever more imperative.

The geneticist, agronomist, entomologist, pathologist, engineer, chemist, physicist, and other specialists develop their topics broadly and precisely. The book gives clear and direct evidence of the important place this subject occupies in research and development programs.

## 76 Agricultural Sciences for the Developing Nations

**Editor: A. H. Moseman**

232 pp., 37 illus., bibliog., index, 1964.

Price: \$6.75. AAAS members' cash orders: \$6.00.

The symposium was devoted to the role of agricultural science and technology in the acceleration of economic progress in newly developing nations. The twelve chapters of this volume comprise an informed summary of the problems and opportunities of technical, economic, and educational assistance in agriculture. The book will be helpful in furnishing some background experience for the use of agricultural planners in the newly emerging countries.

## 66 Germ Plasm Resources

**Editor: Ralph E. Hodgson**

394 pp., 59 illus., bibliog., index, 1961.

Price: \$9.75. AAAS members' cash orders: \$8.50.

The 25 papers treat the subject according to origin of germ plasm, developmental programs, new approaches to uses and perpetuation, and protection of plant and animal germ plasm.

Progress in improving the usefulness of the available germ plasm is measured. The need for additional germ plasm is pointed out, and problems relating to further development, preservation, and utilization of germ plasm to advance plant and animal production are indicated.

## 84 Molecular Mechanisms of Temperature Adaptation

**Editor: C. Ladd Prosser**

398 pp., 127 illus., bibliog., index, 1967.

Price: \$12.50. AAAS members' cash orders: \$10.50.

*Molecular Mechanisms of Temperature Adaptation* is a collection of papers on the general physiology of temperature adaptation in cold-blooded animals, plants, and microorganisms. Twenty-four contributors from the Soviet Union, Germany, Canada, Denmark, and the United States report recent research findings on the diverse molecular mechanisms of response, acclimation, and adaptation to heat and cold in bacteria, plant cells and tissues, insects, fishes, amphibians and reptiles.

Examples of biochemical and physiological mechanisms of both genetic and environmentally induced adaptations to heat and cold are given. Adaptive properties of plants, microorganisms, and poikilothermic animals are shown to have basic similarities. Temperature is used as an environmental parameter for elucidating cellular mechanisms of organism-environment interactions.

## 72 Spermatozoan Motility

**Editor: David W. Bishop**

322 pp., 113 illus., bibliog., index, 1962.

Price: \$7.50. AAAS members' cash orders: \$6.50.

For the first time the details of sperm motility are here presented in monograph form. An integrated series of papers brings together the historical and recent developments in this rapidly growing field of investigation. The oscillating nature of the process and current interpretations of possible mechanisms involved are described in contributions dealing with such features as the physiological parameters of flagellation, fine structure of the flagellum, energetics of movement, biochemical characteristics of flagellum and flagellar proteins, and comparisons of sperm motility with that of other flagellated systems and of muscle.

## 57 Systems of Units

**National and International Aspects**

**Editor: Carl F. Kayan**

308 pp., index, 1959.

Price: \$6.75. AAAS members' cash orders: \$5.75.

Measurement Units: Present Situation. Practices and Problems. Proposals for Unification and Simplification. Comments.



## 82 Civil Defense

**Editor: Henry Eyring**

144 pp., paperbound, 1966.

Price: \$4.00. AAAS members' cash orders: \$3.50.

Whether or not an extensive shelter-building program will diminish or increase the possibility of catastrophic nuclear war is the major question discussed in this book.

The editor of the volume, Henry Eyring, University of Utah, says in the preface: "The important consensus produced at this symposium is that the public should make the decision on civil defense and should be better informed in order to make a wise decision." *Civil Defense* is aimed toward that end.

## 79 Science in Japan

**Editor: Arthur H. Livermore**

496 pp., 165 illus., bibliog., index, 1965.

Price: \$13.00. AAAS members' cash orders: \$11.00.

This volume provides a unique opportunity for American scientists to get both a broad and a detailed picture of recent scientific and technological developments in Japan. Leading Japanese scientists discuss the organization of research in their country and review fundamental research in mathematics, biology, chemistry, physics, sociology, and psychology, as well as applied research in agriculture and other fields.

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**Publisher:**

University of Chicago Press

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